

also from Orizaba, which are exactly similar to the types. The number of rays in the dorsal fin is usually 12, but varies from 11 to 13. Each scale on the body has a rather broad blackish marginal or intramarginal crescent.

In the following table, based only on female specimens, are given in the first column (A) the number of dorsal rays and in the others the following measurements in millimetres:—(B) total length, (C) length to base of caudal, (D) length of head, (E) distance from tip of snout to origin of dorsal, (F) longest anal ray.

	A.	B.	C.	D.	E.	F.
<i>P. pauciradiatus</i> , two of the types, from Orizaba.	13	75	63	15	36.5	9
	12	42	35	9.5	20	5.5
<i>P. pauciradiatus</i> , two of the specimens from Orizaba, collected by Dr. Gadow.	11	72	60	14	36.5	9
	12	67	57	13.5	33	9
<i>P. bimaculatus</i> , four of the specimens from the Rio Tonto, collected by Dr. Gadow.	16	79	65	17	34	14
	14	77	64	16.5	33	13
	15	72	58	15	30	12
	14	62	50	13	27	11
<i>P. bimaculatus</i> , two specimens from San Domingo de Guzman, collected by Dr. A. C. Buller.	17	74	61	16	31	12
	15	72	59	16	30	12

In the typical form of *P. bimaculatus* the scales of the body have narrow dark edges, forming a network which usually fades out below. In five specimens from San Domingo de Guzman, collected by Dr. A. C. Buller, the scales of the middle series have very broad dark edges, giving the appearance of a blackish longitudinal band from operculum to base of caudal. This well-marked variety may be called *Pseudoxiphophorus bimaculatus*, var. *teniatus*.

XLII.—*Descriptions of Three new Fishes from Japan, collected by Mr. R. Gordon Smith.* By C. TATE REGAN, B.A.

SINCE the publication of my report on the fishes collected by Mr. R. Gordon Smith in the Inland Sea of Japan * the British Museum has received a further series from him, which contains examples of three species which appear to be new to science.

fifteen specimens of *P. bimaculatus* from the Rio Tonto, also collected by Dr. Gadow, three have 16, seven have 15, and five have 14 dorsal rays.

* Ann. & Mag. Nat. Hist. (7) xv. 1905, p. 17.

Diagramma aporognathus.

Depth of body $3\frac{1}{5}$ – $3\frac{1}{2}$ in the length, length of head $3\frac{3}{5}$ – $3\frac{4}{5}$. Snout as long as or slightly longer than eye, the diameter of which is $3\frac{3}{4}$ in the length of head, interorbital width $3\frac{1}{4}$ – $3\frac{1}{2}$. Jaws equal, or the lower very slightly projecting; lower jaw without pores; maxillary extending to below the anterior margin of eye. 24 gill-rakers on the lower part of the anterior arch. Scales 110–116 $\frac{11-12}{22-24}$. Dorsal XIV 17, the fourth to the seventh spines the longest, $\frac{1}{3}$ – $\frac{2}{5}$ the length of head; rays of the soft fin subequal in length, $\frac{1}{4}$ the length of head. Anal III 8. Pectoral nearly as long as the head. Caudal apparently emarginate (broken in each specimen). Caudal peduncle $2\frac{1}{2}$ as long as deep. Greyish, with dark oblique undulating stripes along the series of scales.

Two specimens, 260 and 270 mm. in total length, from the Inland Sea.

Gobius (Ctenogobius) atriceps.

Depth of body $4\frac{1}{2}$ in the length, length of head $3\frac{1}{4}$. Snout longer than eye, the diameter of which is $5\frac{1}{2}$ in the length of head and a little less than the interorbital width. Jaws equal anteriorly; maxillary not extending to below the middle of eye. Head naked; nape covered with small scales. Scales in a longitudinal series 38, in a transverse series between second dorsal and anal 13. Dorsal VI 12; rays of the spinous dorsal produced into filaments; rays of the second dorsal slightly increasing in length to the last, which is $\frac{1}{2}$ the length of head and, when laid back, reaches the caudal. Anal 11. Pectoral $\frac{4}{5}$ the length of head; ventral $\frac{3}{5}$ the length of head, extending a little more than $\frac{1}{2}$ of the distance from its base to the origin of anal. Caudal rounded. Caudal peduncle longer than deep. Olivaceous; head blackish; fins dusky, the dorsal and anal light at the base, the pectoral with a pale transverse bar on its basal part.

A single specimen, 80 mm. in total length, from the Inland Sea.

Achilognathus longipinnis.

Pharyngeal teeth 5–5, sickle-shaped, the sides with transverse striæ, the edges entire. Depth of body 2 – $2\frac{1}{4}$ in the length, length of head 4 – $4\frac{1}{3}$. Snout $\frac{1}{2}$ the diameter of eye, which is $2\frac{1}{2}$ – $2\frac{3}{4}$ in the length of head and equal to the interorbital width. Lower jaw a little shorter than the upper; maxillary hardly reaching the vertical from the anterior

margin of eye; no barbels. Scales 35-38 $\frac{5\frac{1}{2}-6}{8-9}$, $5\frac{1}{2}$ or 6 between lateral line and root of ventral. Dorsal II 14-15, originating at a point equidistant from tip of snout and base of caudal; anterior branched rays as long as the head. Anal II 14-15. Pectoral nearly as long as the head, extending to the root of the ventral. Ventral 8-rayed, a little shorter than the pectoral, extending a little beyond the origin of anal. Caudal deeply forked. Caudal peduncle longer than deep. Olivaceous above, silvery below; lower parts of abdomen blackish; vertical fins dusky, the dorsal and caudal with some dark spots on the rays, the anal with a blackish edge; ventral blackish, with the outermost ray white.

Four specimens, 62 to 78 mm. in total length, from the Yamasabu River, Lake Biwa.

BIBLIOGRAPHICAL NOTICE.

Memoirs of the Geological Survey of India.—Paleontologia Indica. Series XV. *Himalayan Fossils.* Vol. IV. *The Fauna of the Spiti Shales.* By Dr. VICTOR UHLIG, Professor of Geology in the University of Vienna. 132 pages, 18 plates, and 10 text-cuts. Folio. 1904. Geol. Surv. Office, Calcutta; Kegan Paul & Co., London; and Friedländer, Berlin.

THE important fossiliferous strata which constitute the basis of this elaborate and well-illustrated Monograph by Dr. Victor Uhlig, of Vienna, are met with in limited areas among the much denuded rocks of the Central Himalaya, especially in the Spiti Valley, latitude N. $32^{\circ} 5'$, longitude E. $78^{\circ} 15'$, and lat. N. $28^{\circ} 51'$, long. E. $77^{\circ} 36'$. The beds consist of dark grey and black shales, 300 feet thick, lying over a limestone and under a sandstone. The former (part of the Lower Gondwana system) is referred to the Jurassic epoch, and the latter or Ginsmal Sandstone (600 feet thick) belongs to the Upper Gondwana and is referred to the Neocomian. The relative age of the "Spiti Fossils" has been the subject of much controversy, and several eminent palæontologists have assisted the Geological Survey of India in this investigation with both head and hand.

In the Introduction Dr. Uhlig makes careful mention of the many geologists who have advanced our knowledge, special and general, of the Spiti Fauna through the clouds of doubt and difficulties encountered in former days; and he gratefully thanks his fellow-workers and friends in India, Europe, and Britain, by whose help this comprehensive and really valuable memoir has been perfected and published. The talented artists and the friendly translator of his MS. are especially thanked. Indeed everybody who has been engaged in this good work has to be congratulated on the complete success of their labours.